
# DSC ITV2 PowerSeries Neo Alarm Panel Integration White Paper

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# 1. Introduction

This document indicates the features/abilities of the DSC ITV2 PowerSeries Neo Alarm Panel solution when integrated with CathexisVision. Functionally, this integration will include the triggering of standard CathexisVision system events, based on information received from the device.

For instructions on installation or configuration of the integration, please consult the DSC ITV2 PowerSeries Neo Alarm Panel ***Integration App-note***, available on the Cathexis website, and/or the ***CathexisVision Setup Manual***.

## 1.1 Integration Purpose

This document will detail the integration of the DSC Neo PowerSeries Alarm Panel with the CathexisVision software. This driver communicates with the panel via the ethernet connection on the Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU. Functionally, this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the DSC Neo Panel.

## 1.2 Requirements

### 1.2.1 General Requirements

- CathexisVision 2018 Service Pack 4 and later.
- Integration supported on Windows and Linux 32/64-bit units.
- Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU communicator module.

### 1.2.2 CathexisVision License Requirements

| License | Name | Description |
|---|---|---|
| **CDSC-2000** | DSC Neo ITV2 Device license. | This license is the “base” license to integrate with an alarm panel. It is applied to the server to which the alarm panel is connected. It will allow for the connection of a single alarm panel. |

**Note**: In this integration, individual alarm panels will require a license for each panel.

### 1.2.3 DSC Specifications

The following hardware components were used to test this integration:

**PowerSeries Neo Security Control Panel HS2128**

- Firmware version: V01.13.01.20.

**Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU**

- Firmware version: 4.17.
- Protocol version: 2.17.

**Full Message LCD Hardwired Security Keypad HS2LCD**

- Firmware version: V01.11.01.13.

## 1.3 Integration Components

All CathexisVision integrations have two component levels: **Device** and **Object**.

| | |
|---|---|
| **Device** | The device is CathexisVision software's interface, which handles all the interaction between CathexisVision and the integrated hardware. When an integration is added to the CathexisVision system, a device is added. The messages received from the device are called Device Events. |
| **Objects** | Objects are the individual pieces of hardware that comprise the integration. There may be multiple "object types" under the objects group. For example, the main controller and door nodes of an access control system are both objects. They are different types of objects. |

**A NOTE ON CAMERA CHANNELS**

The CathexisVision software packages have **limits on camera channels**. A multi-sensor camera is physically a single device (camera) but it requires a camera channel for each one of the internal cameras. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathexisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

# 2. Features and Abilities

This section indicates the features/abilities of the DSC ITV2 PowerSeries Neo Alarm Panel software when integrated with CathexisVision.

## 2.1 General Device Features

- CathexisVision receives event messages from the DSC ITV2 device.
- The DSC Neo PowerSeries Alarm Panel device can be used to integrate with third-party systems.
- A DSC Neo simulator is included with the device to assist third-party developers with API implementation.
- The DSC Neo driver sends and receives UTF-8 encoded XML messages over UDP.
- CathexisVision receives event messages from the DSC Neo device.

## 2.2 Device Objects

Objects are populated automatically as soon as communication between the DSC ITV2 device and CathexisVision is established.

| Object Type | | Abilities |
|---|---|---|
| **General** | | • This integration has Partition, Communicator, Zone, and Communication objects.<br>• Objects are automatically created as soon as communication between the CathexisVision unit and device is established.<br>• Device objects can be commanded as an action of a CathexisVision system event.<br>• Device objects support overlays.<br>• Objects may be linked to cameras to associate device events with video footage. |
| **Partition** | **General Object Features** | • The partition object is a group of zones.<br>• It is used to arm/disarm the associated zones.<br>• The panel keypad (or commands from the NVR) are used to control the device and its state changes, which affect its properties in CathexisVision.<br>• The partition states are updated as events occur on the panel. |
| | **Object Properties** | • ID.<br>• Name.<br>• Zones.<br>• Ready Status. |

| | | |
|---|---|---|
| | | • Armed.<br>• Arm Mode.<br>• Alarm.<br>• Fire Alarm.<br>• CO Alarm.<br>• Alarm Memory.<br>• Fire pre-alert.<br>• Trouble.<br>• Has bypassed zones.<br>• Delay in progress.<br>• Armed with no entry delay.<br>• Programming mode.<br>• Enabled door chime.<br>• Audible Bell.<br>• Audible keypad buzzer alarm. |
| | **States** | • Alarmed.<br>• Armed.<br>• Not ready to arm.<br>• Ready to arm.<br>• Ready to force arm.<br>• Troubled. |
| | **Commands** | • Arm without entry delay.<br>• Away Arm.<br>• Instant Stay Arm.<br>• Night Arm.<br>• Quick Arm.<br>• Stay Arm.<br>• Stay Arm no entry delay.<br>• User Arm. |
| **Communicator** | **General Object Features** | • Lost connections, and reconnections will take several seconds to display.<br>• The device type is the same as the communicator panel's model number.<br>• If the inbound or outbound encryption key is incorrect the communicator object will try to configure encryption. |
| | **States** | • Connection down.<br>• Configuring encryption.<br>• Inbound Encryption Key Mismatch.<br>• Outbound Encryption Key Mismatch.<br>• Connected. |
| | **Object Properties** | • ID.<br>• Name.<br>• Connection. |

| | | |
|---|---|---|
| | | • Device Type.<br>• Software version.<br>• Protocol version. |
| | **Commands** | • N/A. There are no commands for this object. |
| **Zone** | **General Object Features** | • The zone object cannot be controlled while the partition is armed.<br>• Right-click the zone object and select the desired command.<br>• The zone states are updated as events occur on the panel. |
| | **States** | • Alarm.<br>• Bypassed.<br>• Closed.<br>• Delinquency.<br>• Fault.<br>• Low battery.<br>• Open.<br>• Tamper. |
| | **Object Properties** | • ID.<br>• Name.<br>• Open.<br>• Alarm.<br>• Alarm in memory.<br>• Bypassed.<br>• Tamper.<br>• Fault.<br>• Low battery.<br>• Delinquency.<br>• Partitions.<br>• Lost Alarm Type. |
| | **Commands** | • Unbypass. |
| **Communication Channel** | **General Object Features** | • The communication channel object connects using UDP.<br>• It will not go down when communication with the panel is lost.<br>• The communicator object can be used to trigger events when communication with the panel is either established, lost, or when encryption errors occur. |
| | **Object Properties** | • ID.<br>• Name.<br>• Channel Status.<br>• Details.<br>• Creation type.<br>• Creation time. |

| | | |
|---|---|---|
| | | • Idle time (min). |
| | **States** | • States are up or down.<br>• Indicates connection between the device and the software |
| | **Commands** | • N/A. There are no commands for this object. |

## 2.3 Device Events

The CathexisVision DSC ITV2 alarm panel integration generates device events, which are triggered on the device and reflected in CathexisVision.

| Event Element | Features/Abilities |
|---|---|
| **General** | • Events triggered on the device are sent to CathexisVision. |
| **Device Event Types** | • ID.<br>• Time.<br>• Zone name.<br>• Zone number.<br>• Description. |
| **CathexisVision Event Actions** | • Zone bypass.<br>• Entry Delay.<br>• Exit Delay.<br>• Partition Alarm.<br>• Quick Exit Delay.<br>• System Alarm.<br>• Trouble.<br>• Zone Alarm.<br>• Zone open/closed.<br>• Zone trouble. |

## 2.4 Metadatabase

A unique metadatabase is created on the CathexisVision server for this integration. It is fully searchable, with configurable filters based on device event information (as above), and time stamping. The filtered event/s, and the associated video, will then be available for review in a new window from which an archive can be created and exported.

| Database Element | Features/Abilities |
|---|---|
| **General** | • All device events are databased.<br>• Database entries include the footage from cameras linked to device objects.<br>• Multiple cameras may be linked to multiple objects.<br>• Device event metadata is displayed where applicable.<br>• Databased device events may be viewed in the embedded video player, which includes the usual CathexisVision video review tools. |
| **View Options** | • Zone events.<br>• Alarms.<br>• Arming.<br>• Entry/exit delay.<br>• Trouble. |
| **Sort Options** | • Time. |
| **Easy Search** | • Event Type.<br>• Partition Name.<br>• Partition Number.<br>• Zone Name.<br>• Zone Number.<br>• Description.<br>• State.<br>• Arm Method.<br>• User.<br>• Audible.<br>Or<br>• Zone number.<br>• Description.<br>• State.<br>• Arm Method.<br>• User.<br>• Audible.<br>• Urgency.<br>• Restarted.<br>• Device Type.<br>• Device Number. |
| **Filter** | • Time range. |
| **Export** | Database entries may be exported in CSV and PDF format. |

## 2.5 Maps

The CathexisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

| Map Element | Features/Abilities |
|---|---|
| **General** | Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action. |
| **Map Action Triggers** | • All device objects may be set to trigger a map action if the user left-clicks on map.<br>• Some device objects may be set to trigger a map action if a state change message is received from the device.<br>• All device objects may be set to perform a map action if *any* event occurs on the device.<br>• Device objects, which can be configured to trigger CathexisVision events, may also be set to perform a map action when specific CathexisVision events are triggered. |
| **Map Actions Options** | When triggered (see above), objects may perform the following map actions (where applicable):<br>• Connect to a site.<br>• Perform an animation.<br>• Go to a camera preset.<br>• Load a map.<br>• Set a PTZ relay output.<br>• Show a popup menu.<br>• Set a relay output.<br>• Show an HTML block.<br>• Show a block of text.<br>• Show a device popup menu.<br>• Show a Device Event Notification. |

# 3. Conclusion

This document was designed to deal specifically with this integration. For further information about the CathexisVision software, consult the main manual (http://cathexisvideo.com/).

For support, email support@cat.co.za.

**USEFUL LINKS**

*To view **tutorial videos** on CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*